

A NEW PREDACEOUS GALL MIDGE FOR
CALIFORNIA

BY DR. E. P. FELT

Bartlett Tree Research Laboratories, Stamford, Connecticut

A number of flies were received under date of May 10, 1928, from Harold Compere of the Citrus Experiment Station, Riverside, California, accompanied by the statement that the original stock was collected by him in Sydney, New South Wales, and that the material submitted for determination was propagated at Riverside, California, on *Pseudococcus gahani* and appeared like an important natural enemy of mealybugs. The entire rearing, consisting of nearly forty flies, all belong to the same species. Mr. Compere stated that it was suspected that the insect was *Diplosis koebelei* Skuse MS., a species included in Mr. Koebele's "Studies of Parasitic and Predaceous Insects in New Zealand, Australia, and Adjacent Islands" made by permission of the Secretary of Agriculture and at the request of the California State Board of Horticulture. This appeared in Report 51, United States Department of Agriculture, 1893, pages 38-39. There is no description of the insect in this report, though a number of interesting biological data are recorded. There is a brief note by Smith and Compere in relation to this introduced insect under the name *Diplosis*, in the *Journal of Economic Entomology*, Volume 21, page 668, 1928. The life cycle is completed in twelve days.

Later information, received through the courtesy of Mr. Harry S. Smith of the Citrus Experiment Station, Riverside, California, indicates that this insect multiplied abundantly on *Pseudococcus gahani* in cages and that apparently it has become permanently established in California, though its influence is negligible. The adults hang by dozens on spider webs, a habit recorded for a number of gall midges.

Silvestrina koebelei Felt, n. sp.

This species is distinguished from the generic type, *S. silvestrii* Kieffer, by the longer antennæ (in *silvestrii* they reach only to the middle of the abdomen), and by the longer antennal segments in the female (they have a length in *silvestrii* of less than twice the diameter), by the somewhat longer stem of the

segments (those in *silvestrii* being about one-fourth the length of the enlargement), and also by the lack of a large fuscous spot basally on the dorsum of the abdomen. *S. silvestrii* is recorded as preying upon *Diaspis pentagona*, and has been reported from Cape Town and Brazil.

Male. Length, 1 mm. Antennæ about one-fourth longer than the body, thickly haired, pale yellowish; fourteen segments, the fifth binodose, almost trinodose, with the stems one and one-fourth and one and one-half their diameters respectively; the basal enlargement oblate, the distal distinctly constricted at the basal third and with a length one-half greater than its diameter; the circumfilum with thick, stout loops, the basal circumfilum extending only to the tip of the basal enlargement, the loops of the middle circumfilum extending just beyond the constriction of the distal enlargement, and those of the distal circumfilum reaching almost to the tip of the segment. Palpi: the first and second segments short, stout, the third and fourth distinctly longer, each with a length about one-half greater than its diameter. Mesonotum yellowish brown. Scutellum and post-scutellum a light fuscous yellowish. Abdomen a fuscous whitish. Wings hyaline, the third vein uniting at or slightly before the tip of the wing, the fifth vein joining the posterior margin at the distal fourth, its branch at the basal third. Halteres yellowish. Coxæ and femora mostly pale yellowish, the distal portion of femora, tibiæ and tarsi fuscous yellowish. Claws simple, strongly curved, pulvilli rudimentary. Genitalia: basal clasp segment rather long, stout; terminal clasp segment stout, tapering; dorsal plate deeply and triangularly emarginate, the lobes triangular; ventral plate broad and broadly rounded apically.

Female. Length, 1 mm. Antennæ probably nearly as long as the body, sparsely haired, fuscous yellowish, the basal segments yellow, the fifth segment with a stem one-third the length of the cylindrical basal enlargement, the latter with a length two and one-fourth times its diameter. Terminal segment more slender, with a length two and a half times its diameter and apically with a short, knob-like appendage. Ovipositor short, the basal lobe broad and broadly rounded apically. Other characters practically as in the male.

Described from dried specimens and others in balsam mounts.

Types deposited in the collections of the United States National Museum and co-types in the insect collections of the University of California.